

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number  
**WO 2005/073405 A3**

(51) International Patent Classification:

C12Q 1/68 (2006.01) C12N 15/11 (2006.01)

(21) International Application Number:

PCT/IL2005/000097

(22) International Filing Date: 27 January 2005 (27.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/539,579 29 January 2004 (29.01.2004) US  
60/539,566 29 January 2004 (29.01.2004) US

(71) Applicant (for all designated States except US): YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL]; Hi Tech Park, Edmond Safra Campus, Givat Ram, 91390 Jerusalem (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WILLNER, Itamar [IL/IL]; 12 Hashalom Street, 90805 Mevasseret

Zion (IL). XIAO, Yi [CN/IL]; 11/14 Guatemala Street, 96704 Jerusalem (IL). PAVLOV, Valeri [RU/IL]; 11/22 Guatemala Street, 96704 Jerusalem (IL). GILL, Ron [IL/IL]; 52 Ben Maimon Blvd., 92261 Jerusalem (IL). NIAZOV, Tamara [IL/IL]; 23/3 Jessy Cohen Street, 58581 Holon (IL).

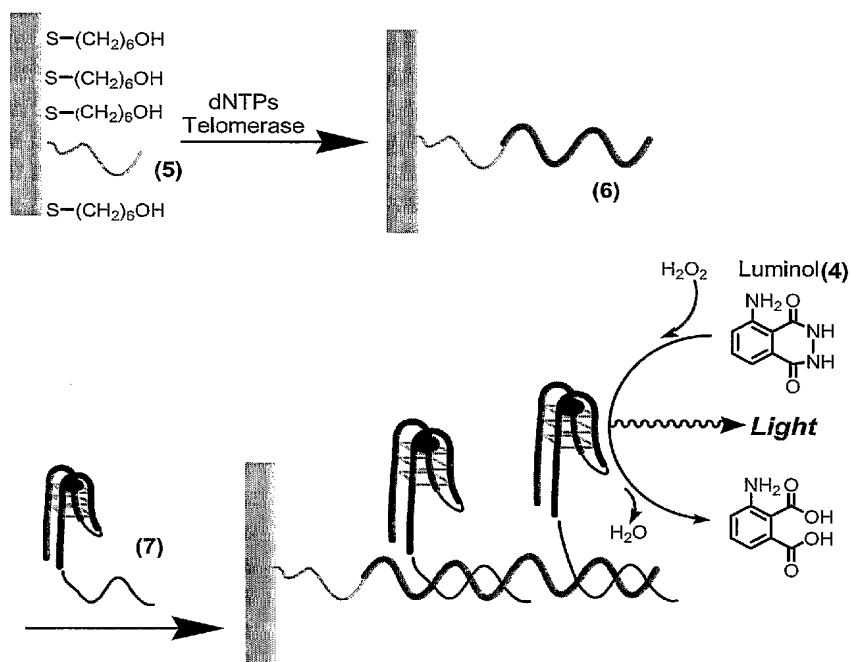
(74) Agent: REINHOLD COHN AND PARTNERS; P.O.B. 4060, 61040 Tel Aviv (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: CATALYTIC POLYNUCLEOTIDE AND ITS USE FOR DETERMINATION OF ANALYTES



(5) = 5'-HS(CH<sub>2</sub>)<sub>6</sub>TTTTTTAATCCGTCGAGCAGAGTT-3'

(6) = 5'-(GGTTAG)<sub>n</sub>-3'

(7) = 5'-CTAACCCCTAACCTTTGGGTAGGGCGGGTTGGG-3'

(57) Abstract: A method for the determination of an analyte in a sample, the method comprising: (a) providing a catalytic polynucleotide; (b) contacting the catalytic polynucleotide with the sample so that the catalytic polynucleotide may bind to the analyte; (c) providing assay conditions such that the catalytic polynucleotide produces an optically detectable signal in the presence of the analyte; and (d) detecting the signal, thereby determining the presence of the analyte in the sample. One application of the method is for the detection of telomerase in a biological sample.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

**(88) Date of publication of the international search report:**  
16 February 2006

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*